MEDICAL POLICY

POLICY TITLE	FUNCTIONAL ENDOSCOPIC SINUS SURGERY FOR CHRONIC RHINOSINUSITIS
POLICY NUMBER	MP 1.152

CLINICAL BENEFIT	☐ MINIMIZE SAFETY RISK OR CONCERN. ☐ MINIMIZE HARMFUL OR INEFFECTIVE INTERVENTIONS. ☐ ASSURE APPROPRIATE LEVEL OF CARE. ☐ ASSURE APPROPRIATE DURATION OF SERVICE FOR INTERVENTIONS. ☒ ASSURE THAT RECOMMENDED MEDICAL PREREQUISITES HAVE BEEN MET. ☐ ASSURE APPROPRIATE SITE OF TREATMENT OR SERVICE.
Effective Date:	**5/1/2024**

I. POLICY

The use of functional endoscopic sinus surgery in the treatment of chronic rhinosinusitis is considered **medically necessary** for individuals with chronic rhinosinusitis when the following criteria are present:

1. Chronic rhinosinusitis symptoms, characterized by at least 2 of the following, at least 1 of which is (a) or (b), are present for at least 12 continuous weeks:
   - Mucopurulent nasal drainage (anterior, posterior, or both); **or**
   - Nasal obstruction (congestion); **or**
   - Facial pain; **or**
   - Facial pressure; **or**
   - Anosmia or hyposmia; **or**
   - Cough (in pediatric chronic rhinosinusitis); **and**
2. Appropriate medical therapy has been attempted and failed, including all of the following:
   - Allergy evaluation, education, and appropriate treatment when indicated;
   - Antibiotics when indicated;
   - Decongestants when indicated;
   - Topical and/or systemic corticosteroids for at least 4 weeks, unless contraindicated;
   - Saline nasal irrigations for at least 4 consecutive weeks;
   - Treatment of rhinitis medicamentosa when present;
   - Education on environmental irritants including tobacco smoke **and**
3. Diagnosis of chronic rhinosinusitis was obtained by symptomatology and one or more of the following objective findings:
   - Evidence of inflammation on nasal endoscopy or computed tomography (CT); **or**
   - Evidence of purulence coming from paranasal sinuses or ostiomeatal complex; **and**

4. If CT was not obtained for diagnosis, it has been obtained prior to surgery (see policy guidelines); **and**
5. There are no serious urgent complications of acute sinusitis that would suggest orbital cellulitis or abscess, intracranial extension of infection, or other complication that would require urgent or emergent surgery such that "appropriate medical therapy" for 4 weeks would not be appropriate.

The use of functional endoscopic sinus surgery is considered **investigational** for the treatment of chronic rhinosinusitis when the above criteria are not met. There is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with this procedure.

Policy Guidelines

Per societal guidelines, a CT is recommended when endoscopic sinus surgery is considered or planned. In addition to demonstrating abnormal mucosa and opacified sinuses, the study will provide anatomic detail necessary to guide the surgery.

Cross-reference:

MP 1.119 - Balloon Ostial Dilation for the Treatment of Chronic Rhinosinusitis
MP 1.140 - Steroid-Eluding Sinus Stents

II. PRODUCT VARIATIONS TOP

This policy is only applicable to certain programs and products administered by Capital Blue Cross and subject to benefit variations as discussed in Section VI. Please see additional information below.

FEP PPO - Refer to FEP Medical Policy Manual. The FEP Medical Policy manual can be found at:

https://www.fepblue.org/benefit-plans/medical-policies-and-utilization-management-guidelines/medical-policies

III. DESCRIPTION/BACKGROUND TOP

Chronic Rhinosinusitis

Chronic rhinosinusitis (CRS) is a common chronic condition associated with significant morbidity. Functional endoscopic sinus surgery (FESS) involves the removal of varying amounts of tissue and the opening of sinus ostia to treat CRS in individuals who have failed medical therapy. CRS is a highly prevalent inflammatory disorder of the paranasal sinuses and the mucosa of the nasal passages that affects 3% to 7% of adults. In adults, CRS is characterized by symptoms related to nasal and sinus obstruction and inflammation, including mucopurulent nasal drainage, nasal congestion, facial pain or pressure, and anosmia or hyposmia, that persist for at least 12 weeks.

Three CRS subtypes exist and may have somewhat different treatment strategies: CRS without nasal polyposis; CRS with nasal polyposis; and allergic fungal sinusitis. The latter is a less common subtype thought to result from chronic allergic inflammation to colonizing nasal fungi. This policy focuses on the more common subtypes: CRS with and without nasal polyposis. Both subtypes present with similar symptoms. However, CRS with nasal polyposis is, by definition, associated with nasal polyps that are visible on rhinoscopy or nasal endoscopy. Further, CRS with nasal polyposis is more likely to be associated with asthma and aspirin intolerance; this triad is referred to as Samter syndrome or aspirin-exacerbated respiratory disease.

CRS is associated with impaired quality of life (QOL) for affected patients, and with high direct and indirect costs for medical treatments and lost productivity. Most often, the negative health effects of CRS are related to the unpleasant symptoms associated with CRS, including nasal congestion, nasal drainage, and facial pain or pressure. In rare cases, CRS can be associated with serious complications, including orbital cellulitis, osteomyelitis, or intracranial extension of infection.

While acute sinusitis is considered a more traditional infectious process, CRS is a chronic inflammatory disease of the upper airways, with multiple underlying causes. Risk factors for CRS with or without nasal polyps include anatomic variations and gastroesophageal reflux. There are conflicting reports about the association between allergy and CRS without nasal polyps, although weak evidence has suggested that allergy may be associated with CRS with nasal polyps. In addition, aspirin sensitivity may be associated with CRS with nasal polyps. The role of bacterial, viral, and fungal microorganisms in CRS has been actively investigated. There is some evidence that CRS is associated with a predominance of anaerobic bacteria. On the other hand, 1 study that used bacterial ribosomal RNA sequencing to evaluate the sinus microbiome in patients with and without CRS found a quantitative increase in bacterial and fungal RNA expression in patients with CRS, but no major differences in the types of microorganisms detected. Bacterial biofilms have been identified in cases of CRS.

Medical Treatment

Medical therapy for CRS, with or without polyps, is often multimodal, including nasal irrigation, topical and/or systemic corticosteroids, and/or antibiotic therapy. Guidelines from the American Academy of Otolaryngology – Head and Neck Surgery (2015) have recommended the use of saline nasal irrigation, topical intranasal corticosteroids, or both, for symptom relief of CRS, on the basis of systematic reviews of randomized controlled trials (RCTs). There is a specific recommendation against the use of topical and systematic antifungal therapies. The guidelines do not include a statement specifically addressing the use of systemic antibiotics for CRS; however, in the list of future research needs, the authors included: “Perform additional RCTs to clarify the impact of antibiotic therapy on CRS outcomes.”

A systematic review by Rudmik and Sole (2015) evaluated the evidence for medical therapies for chronic sinusitis, excluding allergic fungal sinusitis. Reviewers included 29 studies, with 12 meta-analyses (with a total of >60 RCTs), 13 systematic reviews, and 4 individual RCTs not included in any meta-analyses. Topical corticosteroids were associated,

in multiple studies, with improved symptom scores, reduced polyp size, and decreased polyp recurrence after surgery. Saline nasal irrigation was associated, in multiple studies, with significant improvements in symptoms scores. There was some evidence that 2 systemic therapies (oral corticosteroids, doxycycline), both for 3 weeks, improved polyp scores in patients with CRS with nasal polyps. Long-term (>3 months) macrolide therapy was associated in 1 RCT with improved symptoms and QOL in individuals with CRS without nasal polyps, although other studies did not find a benefit with chronic macrolide use.

In 2014, an evidence-based review and consensus statement summarized a series of earlier evidence- based reviews with recommendations related to CRS. This review concluded that both saline irrigation and topical corticosteroids are well-supported by the available published literature for treatment of CRS, with and without nasal polyps. For CRS with polyps, the evidence demonstrated short-term improvement in symptoms after short-term oral corticosteroid treatment. For CRS with or without nasal polyps, a small number of RCTs have shown improvement in nasal endoscopy scores and some symptoms with oral macrolide therapy. However, for CRS with or without nasal polyps, there is very limited evidence on the use of nonmacrolide oral antibiotics.

In 2014, an evidence-based review summarized a series of earlier evidence-based reviews with recommendations related to CRS. This review concluded that both saline irrigation and topical corticosteroids are well-supported by the available published literature for treatment of CRS, with and without nasal polyps. For CRS with polyps, the evidence demonstrated short-term improvement in symptoms after short-term oral corticosteroid treatment. For CRS with or without nasal polyps, a small number of RCTs have shown improvement in nasal endoscopy scores and some symptoms with oral macrolide therapy. However, for CRS with or without nasal polyps, there was very limited evidence on the use of non-macrolide oral antibiotics.

A 2016 Cochrane review of studies evaluating systemic and topical antibiotics for CRS included 5 RCTs (N=293), all of which compared systemic antibiotics with placebo or another pharmacological intervention. Reviewers found "very little evidence that systemic antibiotics are effective in patients with chronic rhinosinusitis" and that "more research in this area, particularly evaluating longer-term outcomes and adverse effects, is required."

In 2019, the U.S. Food and Drug Administration (FDA) approved the first treatment for CRS with nasal polyps - dupilumab (Dupixent®). Results from clinical trials revealed that patients who received dupilumab "had statistically significant reductions in their nasal polyp size and nasal congestion compared to the placebo group" and also "reported an increased ability to smell and required less nasal polyp surgery and oral steroids." This was followed by the approval of omalizumab (Xolair®) in 2020 as add-on maintenance treatment for adults with nasal polyps with an inadequate response to nasal corticosteroids. In 2021, mepolizumab (Nucala®) was also approved as an add-on maintenance treatment in adults with CRS with nasal polyps.

Surgical Treatment

It has now been established that prolonging the time between diagnosis and surgery for CRS may negatively impact outcomes. The term “maximal” medical therapy has fallen out of favor

in as much as it implies surgery should be delayed until all available options have been exhausted. Appropriate medical therapy (AMT) is now more commonly used to suggest striking a balance between proceeding to surgery before appropriate nonsurgical options have been tried and delaying too long so that outcomes are negatively impacted.

The goals of surgery for CRS include removing polyps and debris that may be sources of inflammatory mediators and prevent the effective delivery of local medical therapies. In addition, to varying degrees, surgical techniques involve the creation of open sinus cavities, usually via dilation of the sinus ostia, to permit better drainage from the sinus cavities and more effective delivery of local therapies.

Techniques for functional endoscopic sinus surgery (FESS), in which an endoscope is used to access the sinus cavities and varying degrees of tissue are removed and the sinus ostia are opened, have evolved since the development of the nasal endoscope in the 1960s. FESS has largely replaced various open techniques for CRS (e.g., Caldwell-Luc procedure), although open procedures may have a role in complicated sinus pathologies (e.g., endonasal tumors).

FESS encompasses a variety of degrees of sinus access and tissue removal and is described based on the sinuses accessed. The Draf classification is used to describe degrees of endoscopic frontal sinusotomy (see Table 2).

Table 2. Draf Classification for Endoscopic Frontal Sinusotomy

Type	Description
Draf I	Anterior ethmoidectomy without altering frontal sinus ostium
Draf IIA	Removal of ethmoid cells that extend into frontal sinus
Draf IIB	Removal of frontal sinus floor between the middle turbinate and the lamina papyracea
Draf III[a]	Removal of frontal sinus floor from orbit to orbit with contiguous portions of the superior nasal septum

[a] Modified Lothrop procedure.

FESS can also be used to access the ethmoid sinuses, which may involve creation drainage into the maxillary sinuses (maxillary antrostomy).

Regulatory Status

Functional endoscopic sinus surgery is a surgical procedure and, as such, is not subject to regulation by the U.S. Food and Drug Administration.

IV. RATIONALE

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SUMMARY OF EVIDENCE

For individuals with uncomplicated chronic rhinosinusitis (CRS) with or without nasal polyposis who receive functional endoscopic sinus surgery (FESS), the evidence includes randomized controlled trials (RCTs) and systematic reviews. Relevant outcomes are symptoms, functional outcomes, change in disease status, quality of life, and treatment-related morbidity. A small number of trials, with methodologic limitations, generally have not reported clinically significant differences in symptom improvement with FESS compared with medical therapy. Cochrane reviews evaluating FESS for CRS with and without nasal polyposis have reported that FESS can be accomplished safely, but clinical trials have not demonstrated significant improvements with FESS compared with standard medical therapy. The evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals with uncomplicated CRS refractory to medical therapy who receive FESS, the evidence includes a RCT and a systematic review of non-randomized comparative studies. Relevant outcomes are symptoms, functional outcomes, change in disease status, quality of life, and treatment-related morbidity. One RCT was identified in patients who have failed therapy with nasal irrigation and corticosteroids. This RCT found that FESS was not superior to maximal medical therapy that includes antibiotics along with nasal irrigation and topical or systemic corticosteroids. Although no RCTs have been identified that evaluated FESS in patients with CRS who failed a regimen that included antibiotic therapy, a systematic review of non-randomized comparative cohorts and pre-post studies is available. This meta-analysis suggests that in patients who have failed maximal medical therapy (nasal irrigation, corticosteroids, and antibiotics), FESS can improve symptoms compared to continued medical management. Patients most likely to select and benefit from FESS are those with lower disease-specific quality of life. Surgical treatment of CRS with FESS may thus be appropriate for individuals who meet diagnostic criteria for CRS and have failed maximal medical management. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

V. BENEFIT VARIATIONS

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The existence of this medical policy does not mean that this service is a covered benefit under the member's health benefit plan. Benefit determinations should be based in all cases on the applicable health benefit plan language. Medical policies do not constitute a description of benefits. A member's health benefit plan governs which services are covered, which are excluded, which are subject to benefit limits, and which require preauthorization. There are different benefit plan designs in each product administered by Capital Blue Cross. Members and providers should consult the member's health benefit plan for information or contact Capital Blue Cross for benefit information.

VI. DISCLAIMER

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Capital Blue Cross' medical policies are developed to assist in administering a member's benefits, do not constitute medical advice and are subject to change. Treating providers are solely responsible for medical advice and treatment of members. Members should discuss any medical policy related to their coverage or condition with their provider and consult their benefit information to determine if the service is covered. If there is a discrepancy between this medical policy and a member's benefit information, the benefit information will govern. If a provider or a member has a question concerning the application of this medical policy to a specific member's plan of benefits, please contact Capital Blue Cross' Provider Services or Member Services. Capital Blue Cross considers the information contained in this medical policy to be proprietary and it may only be disseminated as permitted by law.

VII. CODING INFORMATION

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Note: This list of codes may not be all-inclusive, and codes are subject to change at any time. The identification of a code in this section does not denote coverage as coverage is determined by the terms of member benefit information. In addition, not all covered services are eligible for separate reimbursement.

Covered when medically necessary:

Procedure Codes							
31237	31240	31253	31254	31255	31256	31257	31259
31267	31276	31287	31288				

ICD-10-CM Diagnosis Code	Description
J32.0	Chronic maxillary sinusitis
J32.1	Chronic frontal sinusitis
J32.2	Chronic ethmoidal sinusitis
J32.3	Chronic sphenoidal sinusitis
J32.4	Chronic pansinusitis
J32.8	Other chronic sinusitis
J32.9	Chronic sinusitis, unspecified

VIII. REFERENCES

TOP

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IX. POLICY HISTORY

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MP 1.152	**1/30/2018 New policy.** Adopted from BCBSA. Use of functional endoscopic sinus surgery in the treatment of chronic rhinosinusitis is considered medically necessary when criteria is met.
	2/14/2019 Consensus review. No changes to the policy statements. References reviewed. Rationale revised.
	2/25/2020 Consensus review. Policy statement unchanged. References revised. Coding reviewed.
	1/11/2021 Minor Review. Policy statement updated medical necessity criteria. Coding reviewed. References added.
	4/5/2022 Consensus review. Policy statement unchanged. Rationale, FEP, references updated. Coding reviewed.
	3/16/2023 Minor review. Updated symptoms list to include cough for pediatrics. Criteria for mandatory course of antibiotics updated to antibiotics when indicated. Appropriate medical therapy for corticosteroids and nasal irrigation changed from 8 weeks to 4 weeks. Policy statement #3 updated to state that diagnosis of CRS must include one or more of the objective findings listed. CT is required prior to surgery. Policy guidelines background, rationale, and references updated. Removed procedure codes 31238-39, 31241, 31290-91, and 31292-93 from policy.
	2/14/2024 Consensus review. Updated references. No changes to coding.

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